Notice of Allowability	Application No.	Applicant(s)	
	09/684,706	GELVIN ET AL.	
	Examiner	Art Unit	
	Scott M. Sciacca	2478	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendments filed on 8/2/2011 and the interview held on 10/17/2011*.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are *1-32,34-63,65-79,83,92,94,101,103 and 112-119 (renumbered 1-90)*.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *10/17/2011* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Scott M. Sciacca/ Examiner, Art Unit 2478	/Jeffrey Pwu/ Supervisory Patent Examiner, Art Unit 2478

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas Loos (Reg. No. 60,161) on October 17, 2011.

Please amend the claims as follows:

1. (Currently amended) A sensor network comprising a plurality of network elements including at least one node configured to be communicatively coupled among a monitored environment,

wherein the at least one node is further configured to be remotely controllable and to determine an energy cost for communication and a message priority, wherein the energy cost is determined based on a plurality of attenuation values, wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication,

wherein the at least one node is further configured to distribute objects for data processing to one or more of the plurality of network elements, wherein the objects for data processing comprise data and executable code, ~~and~~

wherein the distribution of the objects for data processing varies based on the energy cost for communication and the message priority,

wherein the plurality of network elements is configured to communicate a high priority message code for a high priority event,

wherein, in response to receipt of the high priority message code, the at least one node is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event, and

wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly.

2. (Original) The sensor network of claim 1, wherein the at least one node includes sensing, processing, communications, and storage devices supporting a plurality of processing and protocol layers.

3. (Previously presented) The sensor network of claim 1, wherein the at least one node supports at least one communication mode selected from the group consisting of wireless communications, wired communications, and hybrid wired and wireless communications.

4. (Previously Presneted) The sensor network of claim 1, wherein the at least one node is communicatively coupled to the plurality of network elements, wherein the plurality of network elements includes at least one gateway, at least one server, and at least one network.

5. (Original) The sensor network of claim 4, wherein the at least one gateway comprises at least one node.

6. (Previously presented) The sensor network of claim 4, wherein the at least one gateway is configured to perform at least one function selected from the group consisting of protocol translation, sensor network management, management of

transmissions from a remote user, and to interface with at least one communication physical layer including wired local area network, packet radio, microwave, optical, wireline telephony, cellular telephony, and satellite telephony.

7. (Original) The sensor network of claim 4, wherein the at least one network includes wired networks, wireless networks, and hybrid wired and wireless networks.

8. (Previously presented) The sensor network of claim 4, wherein the at least one network comprises at least one network selected from the group consisting of the Internet, local area networks, wide area networks, metropolitan area networks, and information service stations.

9. (Previously presented) The sensor network of claim 8, wherein internetworking among the plurality of network elements comprises accessing tools for data, code, management, and security functions, wherein data includes signals or images, wherein code includes signal processing, decision support, and database elements, and wherein management includes operation of the at least one node and the sensor network.

10. (Previously presented) The sensor network of claim 4, wherein the plurality of network elements further includes at least one device selected from the group consisting of repeaters and interrogators.

11. (Previously presented) The sensor network of claim 1, wherein the plurality of attenuation values comprises a table of pre-determined attenuation values indexed at least by signaling frequency.

12. (Original) The sensor network of claim 1, wherein at least one redundant information pathway is established among the plurality of network elements.

13. (Original) The sensor network of 1, wherein the plurality of network elements comprise a plurality of network element sets, wherein the plurality of network element sets are layered.

14. (Original) The sensor network of claim 1, wherein the at least one node comprises a plurality of node types, wherein the plurality of node types includes at least one node of a first type and at least one node of a second type, wherein a first network having a first node density is assembled using the at least one node of a first type, wherein a second network having a second node density is assembled using the at least one node of a second type, wherein the second network is overlayed onto the first network.

15. (Previously presented) The sensor network of claim 1, wherein the executable code and data anticipated for future use are predistributed through the sensor network using low priority messages, wherein the executable code and the data

are downloadable from at least one location selected from the group consisting of storage devices of the plurality of network elements, and storage devices outside the sensor network.

16. (Previously presented) The sensor network of claim 1, wherein the plurality of network elements is configured to automatically organize, and wherein the automatic organizing comprises automatically controlling data transfer, processing, and storage within the sensor network.

17. (Previously presented) The sensor network of claim 1, wherein a plurality of levels of synchronization are supported among different subsets of the plurality of network elements, wherein a first level of synchronization is supported among a first subset of the plurality of network elements, and wherein a second level of synchronization is supported among a second subset of the plurality of network elements.

18. (Previously presented) The sensor network of claim 1, wherein data processing is controlled using at least one processing hierarchy, the at least one processing hierarchy controlling at least one event selected from the group consisting of data classifications, data transfers, data queuing, data combining, processing locations, and communications among the plurality of network elements.

19. (Previously presented) The sensor network of claim 1, wherein data is transferred using message packets, wherein the message packets are aggregated into compact forms in the at least one node using message aggregation protocols, and wherein the message aggregation protocols are adaptive to at least one feature selected from the group consisting of data type, node density, message priority, and available energy.

20. (Previously presented) The sensor network of claim 19, wherein the message packets include decoy message packets, and wherein information to be transferred is communicated using random message packets.

21. (Previously presented) The sensor network of claim 1, wherein functions of the at least one node include data acquisition, data processing, communication, data routing, data security, programming, and node operation.

22. (Previously presented) The sensor network of claim 1, wherein the at least one node includes at least one preprocessor coupled to at least one processor and a plurality of application programming interfaces (APIs), wherein the plurality of APIs are coupled to control at least one device selected from the group consisting of sensors, actuators, communications devices, signal processors, information storage devices, node controllers, and power supply devices, wherein the plurality of APIs support remote reprogramming and control of the at least one device.

23. (Original) The sensor network of claim 22, wherein the plurality of APIs are layered.

24. (Previously presented) The sensor network of claim 22, wherein the plurality of APIs are configured to communicate network resource information and message priority information to the plurality of network elements.

25. (Original) The sensor network of claim 24, wherein information transfer among the plurality of network elements is controlled using a synchronism hierarchy established in response to the resource information and message priority information.

26. (Previously presented) The sensor network of claim 22, wherein the at least one preprocessor performs at least one function selected from the group consisting of data acquisition, alert functions, and controlling at least one operating state of the at least one node.

27. (Previously presented) The sensor network of claim 22, wherein the at least one processor is configured to perform at least one function selected from the group consisting of signal identification, database management, adaptation, reconfiguration, and security.

28. (Previously presented) The sensor network of claim 1, wherein the at least one node is configured to control data processing and data transmission in response to a decision probability of a detected event.

29. (Previously presented) The sensor network of claim 1, wherein the at least one node includes at least one sensor selected from the group consisting of seismic, acoustic, infrared, thermal, force, vibration, pressure, humidity, current, voltage, magnetic, biological, chemical, acceleration, and visible light sensors.

30. (Original) The sensor network of claim 29, wherein the at least one sensor is external to the at least one node.

31. (Original) The sensor network of claim 29, wherein data gathered by the at least one sensor is processed and a predetermined identifying code representing the data is propagated through the network, wherein a high priority message containing information regarding a high priority event is represented by a high priority message code, and wherein receipt of the high priority message code by the at least one node invokes a priority protocol that causes message packets to be broadcast to nodes adjacent to a path that will inhibit messaging from nodes not engaged in conveying the information regarding the high priority event.

32. (Previously presented) The sensor network of claim 1, wherein the plurality of network elements are self-assembling, wherein search and acquisition modes of the at least one node search for participating ones of the plurality of network elements, wherein a determination is made whether each of the participating ones of the plurality of network elements are permitted to join the sensor network using a message hierarchy, and wherein the sensor network is surveyed at random intervals for new nodes and missing nodes.

33. (Cancelled)

34. (Previously presented) The sensor network of claim 1, wherein a start node is selected as a base node, wherein the base node communicates an assembly packet throughout the sensor network, wherein information of the assembly packet alternates with each successive communication between directing a node to become a base node of a particular cluster number and directing a node to become a remote node of a particular cluster number, and wherein the particular cluster number is incrementally changed with each successive communication of the assembly packet.

35. (Previously presented) The sensor network of claim 1, wherein at least one start node is selected as at least one base node, wherein the at least one base node communicates an assembly packet throughout the sensor network, wherein information of the assembly packet alternates with each successive communication between

directing at least one node to become at least one base node of a particular cluster number and directing at least one other node to become at least one remote node of a particular cluster number, and wherein the particular cluster number is incrementally changed with each successive communication of the assembly packet.

36. (Previously presented) The sensor network of claim 1, wherein synchronism is established among the plurality of network elements using assembly packets.

37. (Previously presented) The sensor network of claim 1, wherein the sensor network is managed as a distributed and active database using a distributed resource management protocol, wherein the plurality of network elements are reused among different applications, and wherein the plurality of network elements are used in multiple classes of applications.

38. (Previously presented) The sensor network of claim 1, further comprising at least one database, wherein the at least one database includes at least one storage device selected from the group consisting of storage devices coupled to at least one of the plurality of network elements and storage devices of the at least one node.

39. (Previously presented) The sensor network of claim 38, wherein cooperative sensing uses information of the at least one database for non-local event correlation.

40. (Original) The sensor network of claim 38, wherein the at least one database comprises data-driven alerting methods that recognize conditions on user-defined data relationships including coincidence in signal arrival, node power status, and network communication status.

41. (Original) The sensor network of claim 38, wherein the at least one database is implemented in small foot print databases at a level of the at least one node and in standard query language (SQL) database systems at a level of at least one server.

42. (Previously presented) The sensor network of claim 1, wherein data is collected by the at least one node, and wherein at least one operation is performed on the data in response to parameters established by a user input, the at least one operation selected from the group consisting of energy detection, routing, processing, storing, and fusing.

43. (Original) The sensor network of claim 42, wherein the routing, processing, storing, and fusing are performed in response to at least one result of the energy detection.

44. (Original) The sensor network of claim 42, wherein routing comprises selecting at least one data type for routing, selecting at least one of the plurality of network elements to which to route the selected data, selecting at least one route to the

selected at least one of the plurality of network elements, and routing the selected at least one data type to the selected at least one of the plurality of network elements.

45. (Original) The sensor network of claim 44, wherein routing comprises transmitting data in at least one message as a compact entry in a codebook.

46. (Original) The sensor network of claim 42, wherein processing comprises selecting at least one data type for processing, selecting at least one processing type, selecting at least one of the plurality of network elements to perform the selected at least one processing type, and transferring the selected at least one data type to the selected at least one of the plurality of network elements using at least one route through the sensor network.

47. (Previously presented) The sensor network of claim 46, wherein selecting the at least one processing type comprises determining at least one probability associated with a detected event and selecting at least one processing type in response to the at least one probability.

48. (Previously presented) The sensor network of claim 46, wherein data processed in a plurality of nodes is aggregated for further processing.

49. (Previously presented) The sensor network of claim 46, wherein data processed by the at least one node is aggregated for reporting.

50. (Previously presented) The sensor network of claim 42, wherein storing comprises selecting at least one data type for storage, selecting at least one storage type, selecting at least one of the plurality of network elements to perform the selected at least one storage type, and transferring the selected at least one data type to the selected at least one of the plurality of network elements using at least one route through the sensor network.

51. (Previously presented) The sensor network of claim 42, wherein fusing comprises a first node transmitting at least one query request to at least one other node, wherein the first node collects data from the at least one other node in response to the at least one query request and processes the collected data.

52. (Previously presented) The sensor network of claim 1, wherein the at least one node comprises a plurality of nodes with each of the plurality of nodes including at least one hi-static sensor and a generator for producing at least one energy beam that is radiated from the plurality of nodes, wherein the at least one energy beam comprises a combined probe beam and signal code for beam intensity control and propagation measurement, wherein the at least one energy beam is modulated in time to communicate an identifying code corresponding to a source node, and wherein the at

least one energy beam is at least one type selected from the group consisting of infrared, visible, acoustic, and microwave beams.

53. (Original) The sensor network of claim 1, wherein at least one of the plurality of network elements determines a position of the at least one node.

54. (Previously presented) The sensor network of claim 1, wherein software is transferable among the plurality of network elements, and wherein software transfer is remotely controllable.

55. (Original) The sensor network of claim 1, wherein at least one public key security protocol is used to protect communications.

56. (Previously presented) The sensor network of claim 1, wherein the at least one node includes a Global Positioning System device.

57. (Previously presented) The sensor network of claim 1, wherein the at least one node comprises at least one communication modem.

58. (Original) The sensor network of claim 1, wherein communications among the plurality of network elements comprise multihop communications.

59. (Previously presented) The sensor network of claim 1, wherein the monitored environment is at least one environment selected from the group consisting of electronic equipment, mechanical equipment, electro-mechanical equipment, a facility, a structure, a material, a transportation system, a vehicle, an outdoor area, an indoor area, a biological system, a person, and an animal.

60. (Previously presented) The sensor network of claim 1, wherein the plurality of network elements are configured for short range and long range communications.

61. (Previously presented) The sensor network of claim 1, wherein the at least one node is configured to be contained in a sealed and waterproof system.

62. (Previously presented) The sensor network of claim 1, wherein the at least one node comprises a plurality of software modules, wherein a plurality of interfaces support couplings among the plurality of software modules, wherein the plurality of interfaces are reused among the plurality of software modules by changing at least one inter-module coupling, and wherein the plurality of software modules are dynamically configured at run-time.

63. (Currently amended) A sensor network including at least one node configured to be communicatively coupled among an environment, and

wherein the at least one node is further configured to determine an energy cost for communication and a message priority, wherein the energy cost is determined based on a plurality of attenuation values, wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication,

wherein the at least one node is further configured to distribute data processing in the sensor network, and

wherein the distribution of the data processing varies based on the energy cost for communication and the message priority.

wherein the sensor network is configured to communicate a high priority message code for a high priority event,

wherein, in response to receipt of the high priority message code, the at least one node is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event, and

wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly.

64. (Cancelled)

65. (Previously presented) The sensor network of claim 63, wherein the first processor is a preprocessor.

66. (Previously presented) The sensor network of claim 63, wherein the second processor is configured with an operating system.

67. (Previously presented) The sensor network of claim 63, wherein the plurality of attenuation values comprises a table of pre-determined attenuation values indexed at least by signaling frequency.

68. (Previously presented) The sensor network of claim 63, wherein the at least one node comprises a storage device configured to store at least part of a distributed database.

69. (Previously presented) The sensor network of claim 63, wherein the at least one node is configured to control data processing using at least one processing hierarchy, the at least one processing hierarchy controlling at least one function selected from the group consisting of data classifications, data transfers, data queuing, data combining, processing locations, and communications.

70. (Previously presented) The sensor network of claim 63, wherein the at least one node includes a plurality of application programming interfaces (APIs), wherein the plurality of APIs is configured to control at least one device selected from the group consisting of sensors, actuators, communications devices, signal processors,

information storage devices, node controllers, and power supply devices, and wherein the plurality of APIs are layered.

71. (Previously presented) The sensor network of claim 70, wherein the plurality of APIs comprise an API configured to enable the first processor to control the second processor.

72. (Previously presented) The sensor network of claim 71, wherein the API is configured to enable the first processor to control the second processor is configured to permit the first processor to reboot the second processor.

73. (Previously presented) The sensor network of claim 72, wherein the first processor is configured to reboot the second processor if the first processor does not receive an acknowledgment to a predefined message with a predefined time period.

74. (Previously presented) The sensor network of claim 63, wherein the at least one node is further configured to collect data and to perform at least one operation on the data in response to parameters, the at least one operation selected from the group consisting of energy detection, routing, processing, storing, and fusing.

75. (Previously presented) The sensor network of claim 74, wherein routing comprises selecting at least one data type for routing, selecting a destination to which to

route the selected data, selecting at least one route, and routing the selected at least one data type.

76. (Previously presented) The sensor network of claim 74, wherein processing comprises selecting at least one data type for processing, selecting at least one processing type, performing the selected at least one processing type, and transferring the selected at least one data.

77. (Previously presented) The sensor network of claim 74, wherein storing comprises selecting at least one data type for storage, selecting at least one storage type, performing the selected at least one storage type, and transferring the selected at least one data type.

78. (Previously presented) The sensor network of claim 74, wherein fusing comprises the first node transmitting at least one query request, and wherein the first node collects data in response to the at least one query request and processes the collected data.

79. (Previously presented) The sensor network of claim 63, wherein software is transferable to the at least one node, and wherein software transfer is remotely controllable.

80-82. (Cancelled)

83. (Currently amended) A sensor network comprising:

means for coupling a plurality of network elements including at least one local node, wherein at least one function of the at least one local node is configured for remote control;

means for collecting sensor data;

means for communicating node information regarding message priority and energy availability from the at least one local node to one or more other nodes of the plurality of network elements;

means for determining the energy availability based on a plurality of attenuation values, wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication;

means for distributing processing of the collected sensor data among the plurality of network elements,

wherein the distribution of the data processing varies dynamically based on the message priority and the energy availability, ~~and~~

wherein the one or more other nodes are each a member of the sensor network prior to receiving the node information from the at least one local node,

wherein the plurality of network elements is configured to communicate a high priority message code for a high priority event.

wherein, in response to receipt of the high priority message code, the at least one local node is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event, and

wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly.

84-91. (Cancelled)

92. (Currently amended) A sensor network comprising a plurality of network elements including at least one node configured to be coupled among a monitored environment,

wherein the at least one node includes at least one sensor,

wherein the at least one node is further configured to process data gathered from the monitored environment by the at least one sensor and to propagate a predetermined identifying code representing the gathered data through the sensor network,

wherein the at least one node is further configured to determine a message priority and an energy cost for communication and to distribute data and executable code through the network using messages of predetermined priority, wherein the energy cost is determined based on a plurality of attenuation values,

wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication,

wherein the plurality of network elements is configured to communicate a high priority message code for a high priority event,

wherein, in response to receipt of the high priority message code, the at least one node is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event, wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly, and

wherein a distribution of data processing by the plurality of network elements varies based on a priority of the message.

93. (Cancelled)

94. (Previously presented) The sensor network of claim 92, wherein the at least one node is further configured to communicate an energy cost to the plurality of network elements, and wherein the plurality of network elements is configured to distribute data processing through the sensor network based on the energy cost.

95-100. (Cancelled)

101. (Currently amended) A network comprising:

a plurality of network elements including at least one node configured to be communicatively coupled among a monitored or controlled environment,

wherein the at least one node is further configured to determine a message priority and an energy cost for communication and to distribute data and executable code through the network using messages of predetermined priority, wherein the energy cost is determined based on a plurality of attenuation values,

wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication,

wherein the plurality of network elements is configured to distribute data processing through the network, ~~and~~

wherein the distribution of data processing varies based on at least the energy cost for communication

wherein the plurality of network elements is configured to communicate a high priority message code for a high priority event,

wherein, in response to receipt of the high priority message code, the at least one node is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event, and

wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly.

102. (Cancelled)

103. (Currently amended) A sensor network comprising:

a plurality of network elements including at least one node configured to be communicatively coupled among a monitored environment,

wherein the at least one node is further configured to communicate an energy cost for communication and a message priority to the plurality of network elements,

wherein the plurality of network elements is configured to communicate a high priority message code for a high priority event,

wherein, in response to receipt of the high priority message code, the at least one node is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event,

wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly,

wherein the plurality of network elements is configured to distribute data processing through the sensor network in response to the energy cost for communication,

wherein the energy cost is determined based on a plurality of attenuation values,

wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication,

wherein the distribution of the data processing comprises selecting at least one data type for processing, selecting at least one of the plurality of network elements to process the selected at least one data type, and transferring data of the selected at least one data type to the selected at least one of the plurality of network elements, and

wherein the distribution of data processing varies based on the message priority.

104-111. (Cancelled)

112. (Currently amended) A sensor network comprising:

a plurality of network elements including at least one local node configured to be communicatively coupled among a monitored local environment, wherein the at least one local node is further configured to collect sensor data from the monitored local environment, to be remotely controllable, and to determine information regarding message priority to one or more other nodes of the plurality of network elements; and

wherein the plurality of network elements is configured to distribute, after the at least one local node has become a member of the sensor network, data processing on the collected data to one or more of the plurality of network elements, wherein the distribution of the data processing varies based on the message priority and an energy cost for communication, wherein the energy cost is determined based on a plurality of attenuation values, ~~and~~ wherein the plurality of attenuation values comprises at least one attenuation value for wireless communication and at least one attenuation value for wired communication.

wherein the plurality of network elements is configured to communicate a high priority message code for a high priority event, wherein, in response to receipt of the high priority message code, the at least one local node is configured to broadcast one or more inhibit messages configured to inhibit messaging from nodes not engaged in conveying the high priority event, and wherein at least one inhibit message of the one or more inhibit messages is broadcast wirelessly.

113. (Previously presented) The sensor network of claim 112, wherein the distribution of the data processing comprises:

routing the collected data of a first data type to a first one of the plurality of network elements; and

routing the collected data of a second data type to a second one of the plurality of network elements.

114. (Previously presented) The sensor network of claim 112, wherein the distribution of the data processing comprises selecting a processing type, selecting at least one of the plurality of network elements to perform the selected processing type, and transferring at least a portion of the collected data to the selected at least one of the plurality of network elements for processing.

115. (Previously presented) The sensor network of claim 112, wherein the plurality of network elements is further configured to select at least one storage type for at least a portion of the collected data, to select at least one of the plurality of network elements to store data of the at least one storage type, and to transfer the at least a portion of the collected data to the selected at least one of the plurality of network elements.

116. (Previously presented) The sensor network of claim 112, wherein the at least one local node comprises:

at least one sensor for collecting the sensor data;

a preprocessor coupled to receive the collected data from the at least one sensor; and

a processor, coupled to the preprocessor, configured to perform processing associated with the collected data.

117. (Previously presented) The sensor network of claim 112, wherein the plurality of network elements is further configured to predistribute data anticipated for future use through the sensor network using low priority messages.

118. (Previously presented) The sensor network of claim 112, wherein:

the plurality of network elements is further configured to self-assemble into a multi- cluster network, wherein the self-assembly comprises a base node communicating an assembly packet through the sensor network.

119. (Previously presented) The sensor network of claim 112, wherein:

the distribution of the data processing further varies dynamically based on energy availability on the one or more other nodes.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Sciacca whose telephone number is (571)270-1919. The examiner can normally be reached on Monday thru Friday, 7:30 A.M. - 5:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott M. Sciacca/
Examiner, Art Unit 2478

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2478